

ABSTRACT

A micromechanical pressure sensor device, particularly for measuring low absolute pressures and/or small differential pressures. The device includes a frame that is formed at least partially by a semiconductor material, a membrane retained by the frame, at least one measuring resistor that is disposed at a first location in or on the membrane and whose resistance value is a function of pressure-induced mechanical stresses in the membrane, and at least one compensating resistor that is disposed at a second location in or on the membrane and whose resistance value is a function of pressure-induced mechanical stresses in the membrane. The resistance value changes at the first location with a first linear component and a first quadratic component as a function of the pressure, and the resistance value changes at the second location approximatatively without a linear component and with a second quadratic component, which is proportional to the first quadratic component, as a function of the pressure.